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LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			RUTLEDGE, AMELIA L	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/659,568

Applicant(s)

CHEN ET AL.

Examiner

Amelia Rutledge

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9,11-14,16-28 and 30-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-9,11-14,16-28 and 30-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is responsive to communications: Amendment, filed 09/27/2007; RCE, filed 09/27/2007.
2. Claims 1-4, 6-9, 11-14, 16-28, and 30-36 are pending in the case. Claims 1, 14, and 23 are independent claims.

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/27/2007 has been entered.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 2, 6-9, 11-14, 19-28, and 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price et al. (hereinafter "Price"), "Linking By Inking: Trailblazing in a Paper-like Hypertext", *HyperText 98*, Pittsburgh, PA, copyright**

**ACM 1998, p. 30-39, in view of Farrett, U.S. Patent No. 7,107,261 B2, issued September 2006.**

**Regarding independent claim 1,** Price teaches XLibris, a hypertext system using a paper document metaphor, i.e., an electronic document. Price teaches monitoring an electronic document for user annotations and recognizing entry of an annotation into the electronic document (p. 32, Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2, par. 4) because as a reader annotates a document the system performs queries and displays links to related pages (Fig. 3). The queries locate documents related to the annotation using the annotation and context data proximal to the annotation, because each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2). Also see p. 35, "Ink Anchors", where annotations are used to contextually link to nearby annotations or relevant annotations.

While Price does not explicitly teach that collecting the context data comprises deriving at least two search terms, comparing the search terms to a history of search terms, and weighting each of the search terms according to whether a particular search term is included in the history, a higher weight being assigned to a search term that is included in the history, Farrett teaches a client side search engine which retains a history record of search terms which is updated and refined, and further assigning a weighted probability category to a keyword that matches the search term keyword (col. 1, l. 40-col. 2, l. 36). Farrett teaches weighting each search term according to whether a particular search term is included in the history of search terms, a higher weight being

assigned to a search term that is included in the history of search terms (col. 4, l. 9-col. 5, l. 5; claim 1).

Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining keywords from annotations made by the user. Price teaches classifying annotations into several categories which are designated by user input of a gesture, including circled phrases, underlines, highlights, circled passages, and margin bars, and Price teaches that the selections are then converted into queries and keywords and related text links are computed through a full text search (p. 34, col. 1, par. 2-5); compare to determining keywords that are likely to be of interest to a user based on words contained in documents previously accessed by the user.

Price discloses that each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2), and Farrett is directed toward weighted keywords, therefore Price and Farrett are analogous art and it would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

**Regarding dependent claim 2**, Price teaches extracting words from text proximal to the annotation (p. 34, Col. 1, par. 2-3).

**Regarding dependent claims 6-7**, while Price teaches deriving search terms, Price does not explicitly teach comparing the search terms to a history of search terms; and weighting each of the search terms according to whether a particular search term is included in the history of search terms, a higher weight being assigned to a search term that is included in the history of search terms. However, Farrett teaches a client side search engine which retains a history record of search terms which is updated and refined, and further assigning a weighted probability category to a keyword that matches the search term keyword (col. 1, l. 40-col. 2, l. 36). Farrett teaches weighting each search term according to whether a particular search term is included in the history of search terms, a higher weight being assigned to a search term that is included in the history of search terms (col. 4, l. 9-col. 5, l. 5; claim 1). Farrett teaches that a history of search terms can also be applied to a knowledge base, therefore comprising a history of search terms used by all users of a particular group of users, i.e., the users of the knowledge base (col. 5, l. 37-49).

Price discloses that each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2), and Farrett is directed toward weighted keywords, therefore Price and Farrett are analogous art and it would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system

would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

**Regarding dependent claim 8**, Price teaches searching the electronic document for terms that match or are similar to the annotation (p. 35, "Ink Anchors").

**Regarding dependent claim 9**, while Price does not explicitly teach searching remote sites for documents containing terms that match or are similar to the annotation, Farrett teaches that knowledge bases may be provided separate from the system, i.e., remotely (col. 3, l. 1-2). It would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

**Regarding dependent claim 11**, while Price does not explicitly teach that the previous documents are limited to documents accessed within a specified time period, Farrett teaches limiting the documents previously accessed by the user to documents accessed within a specified time period since Farrett teaches saving of the history record, which would allow limiting of the time period (col. 4, l. 38-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system

would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

**Regarding dependent claim 12**, Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining keywords from annotations made by the user and determining keywords that are likely to be of interest to a user based on the annotation and words contained in documents previously accessed by the user, since Price teaches that the system generates further reading lists for each document and that readers can access views that show a list of links to related documents, as well as document clippings (p. 34-35).

**Regarding dependent claim 13**, Price teaches that an annotation comprises a circled phrase (p. 34, par. 2).

**Regarding independent claim 14**, Price teaches XLibris, a hypertext system using a paper document metaphor, i.e., an electronic document. Price teaches monitoring an electronic document for user annotations and recognizing entry of an annotation into the electronic document (p. 32, Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2, par. 4) because as a reader annotates a document the system performs queries and displays links to related pages (Fig. 3). The queries locate documents related to the annotation using the annotation and context data proximal to the annotation, because each annotation is interpreted as a text selection and transformed into a list of word



weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2). Also see p. 35, "Ink Anchors", where annotations are used to contextually link to nearby annotations or relevant annotations. Price teaches search and extraction modules (p. 35-36, "Implementation").

Price teaches determining keywords that are likely to be of interest to a user based on words contained in documents previously accessed by the user, because Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining keywords from annotations made by the user and determining keywords that are likely to be of interest to a user based on the annotation and words contained in documents previously accessed by the user, since Price teaches that the system generates further reading lists for each document and that readers can access views that show a list of links to related documents, as well as document clippings (p. 34-35); compare to determining keywords that are likely to be of interest to a user based on words contained in documents previously accessed by the user.

While Price does not explicitly teach that the history module includes one or more historical keywords that were previously used, and that the extraction module weights keywords according to whether or not the keywords are included in the history module, Farrett teaches a client side search engine which retains a history record of search terms which is updated and refined, and further assigning a weighted probability category to a keyword that matches the search term keyword (col. 1, l. 40-col. 2, l. 36).

Farrett teaches weighting each search term according to whether a particular search term is included in the history of search terms, a higher weight being assigned to a search term that is included in the history of search terms (col. 4, l. 9-col. 5, l. 5; claim 1). While Price teaches that the information processing module is further configured to locate the related content based on the annotation, the one or more keywords from the context data, and the weighted keywords (p. 34-35), Price does not explicitly teach that the keywords are weighted according to whether or not the keywords are included in the history module, however, Farrett teaches a client side search engine which retains a history record of search terms which is updated and refined, and further assigning a weighted probability category to a keyword that matches the search term keyword (col. 1, l. 40-col. 2, l. 36). Farrett teaches weighting each search term according to whether a particular search term is included in the history of search terms, a higher weight being assigned to a search term that is included in the history of search terms (col. 4, l. 9-col. 5, l. 5; claim 1).

Price discloses that each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2), and Farrett is directed toward weighted keywords, therefore Price and Farrett are analogous art and it would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system would have the ability to learn from prior searches for a user relative to a given

knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

**Regarding dependent claim 19**, Price teaches extracting keywords from text near to the annotation (p. 34, Col. 1, par. 2-3).

**Regarding dependent claim 20**, while Price in view of Farrett does not explicitly teach that the related content located by the information processing module comprises documents on a network that contain one or more of the keywords, it would have been obvious to one of ordinary skill in the art at the time of the invention to adapt the system to operate to access documents on a network, since searching documents on a network was well known in the art at the time of the invention, as disclosed by Farrett at col. 1, l. 13-15. Price discloses that each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2), and Farrett is directed toward weighted keywords, therefore Price and Farrett are analogous art and it would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

**Regarding dependent claim 21**, Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the

reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining keywords from annotations made by the user; Price teaches classifying annotations into several categories which are designated by user input of a gesture, including circled phrases, underlines, highlights, circled passages, and margin bars, and Price teaches that the selections are then converted into queries and links are computed through a full text search (p. 34, col. 1, par. 2-5).

**Regarding dependent claim 22**, while Price does not explicitly teach a user interface configured to present keywords to the user and provide for selection of none or one or more of the keywords by the user, Farrett teaches displaying keywords to the user for selection in a user interface (col. 5, l. 1-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

**Regarding independent claim 23**, Price teaches XLibris, a hypertext system using a paper document metaphor, i.e., an electronic document. Price teaches monitoring an electronic document for user annotations and recognizing entry of an annotation into the electronic document (p. 32, Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2, par. 4) because as a reader annotates a document the system performs queries and displays links to related pages (Fig. 3). The queries locate documents related to the

annotation using the annotation and context data proximal to the annotation, because each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2). Also see p. 35, "Ink Anchors", where annotations are used to contextually link to nearby annotations or relevant annotations.

Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining keywords from annotations made by the user. Price teaches classifying annotations into several categories which are designated by user input of a gesture, including circled phrases, underlines, highlights, circled passages, and margin bars, and Price teaches that the selections are then converted into queries and keywords and related text links are computed through a full text search (p. 34, col. 1, par. 2-5); compare to determining keywords that are likely to be of interest to a user based on words contained in documents previously accessed by the user.

Price teaches that annotations that select a phrase result in weighted queries based on the entire surrounding sentence with the emphasis on the selected words (p. 34, Col. 1, par. 2-4), resulting in a query for a search with words indicated by the annotation and keywords derived from the context, i.e. search terms selected from one or more words indicated by the annotation. While Price does not explicitly teach a keyword history list, Farrett teaches a client side search engine which retains a history record of search terms which is updated and refined, and further assigning a weighted probability category to a keyword that matches the search term keyword (col. 1, l. 40-

col. 2, l. 36). Farrett teaches weighting each search term according to whether a particular search term is included in the history of search terms, a higher weight being assigned to a search term that is included in the history of search terms (col. 4, l. 9-col. 5, l. 5; claim 1).

Price discloses that each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2), and Farrett is directed toward weighted keywords, therefore Price and Farrett are analogous art and it would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

**Regarding dependent claim 24**, Price teaches that an annotation comprises a circled phrase (p. 34, par. 2).

**Regarding dependent claim 25**, claim 25 is directed toward substantially similar subject matter as claimed in dependent claim 3, and is rejected along the same rationale.

**Regarding dependent claim 26**, Price teaches locating keywords on the target page, which may be a page of the document (p. 34, par. 1).

**Regarding dependent claim 27**, claim 27 is directed toward substantially similar subject matter as claimed in dependent claim 20, and is rejected along the same rationale.

**Regarding dependent claim 28**, Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7; Fig. 6). Price teaches determining keywords from annotations made by the user.

**Regarding dependent claims 30-32**, while Price does not explicitly teach weighting and ranking the search terms, where the search terms were previously used by a user or group of users, Farrett teaches a client side search engine which retains a history record of search terms which is updated and refined, and further assigning a weighted probability category to a search term that matches the search term keyword (col. 1, l. 40-col. 2, l. 36). Farrett teaches weighting each search term according to whether a particular search term is included in the history of search terms, a higher weight being assigned to a search term that is included in the history of search terms (col. 4, l. 9-col. 5, l. 5; claim 1). Farrett teaches that a history of search terms can also be applied to a knowledge base, therefore comprising a history of search terms used by all users of a particular group of users, i.e., the users of the knowledge base (col. 5, l. 37-49), and teaches that the system can be used for a variety of applications, thus teaching and suggesting a history list for a user or group of users.

Price discloses that each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2), and Farrett is directed toward weighted keywords, therefore Price and Farrett are analogous art and it would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

**Regarding dependent claim 33**, Price teaches detecting user input of a gesture that is associated with a search task; wherein the locating information related to the annotation using the annotation and the context data is performed responsive to the detecting, since Price teaches classifying annotations into several categories which are designated by user input of a gesture, including circled phrases, underlines, highlights, circled passages, and margin bars, and Price teaches that the selections are then converted into queries and links are computed through a full text search (p. 34, col. 1, par. 2-5).

**Regarding dependent claim 34**, Price teaches assigning, by the user, the search task to the gesture so as to associate the gesture with the search task, since Price teaches classifying annotations into several categories which are designated by user input of a gesture, including circled phrases, underlines, highlights, circled



passages, and margin bars, and Price teaches that the selections are then converted into queries and links are computed through a full text search (p. 34, col. 1, par. 2-5).

**Regarding dependent claim 35**, Price teaches that the information processing module is further configured to perform a search to locate the related content responsive to when the annotation monitoring module detects user input of a gesture that is associated with a search task, because Price teaches classifying annotations into several categories which are designated by user input of a gesture, including circled phrases, underlines, highlights, circled passages, and margin bars, and Price teaches that the selections are then converted into queries and links are computed through a full text search (p. 34, col. 1, par. 2-5).

**Regarding dependent claim 36**, Price teaches detecting user input of a gesture that is associated with a search task; wherein the locating additional content that may be of interest to the user by executing a search is performed responsive to the detecting, because Price teaches classifying annotations into several categories which are designated by user input of a gesture, including circled phrases, underlines, highlights, circled passages, and margin bars, and Price teaches that the selections are then converted into queries and links are computed through a full text search (p. 34, col. 1, par. 2-5).

5. **Claims 3, 4, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price in view of Farrett as applied to the claims above, and**

**further in view of Haveliwala et al. (hereinafter "Haveliwala"), "Evaluating Strategies for Similarity Search on the Web", WWW2002, May 2002, p. 432-442.**

**Regarding dependent claim 3**, while Price in view of Farrett teaches a hypertext application, Price does not explicitly teach locating objects near to an annotation object in a document object model (DOM) associated with the annotation. However, Haveliwala teaches locating text objects near to an anchor object, in an associated DOM of a hypertext document (p. 433, par. 2). Price, Farrett, and Haveliwala are analogous art because all three are directed toward query and relevance searching of documents based on keywords. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price in view of Farrett, because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4) and the weighted history list of Farrett.

**Regarding dependent claim 4**, while Price in view of Farrett teaches interpreting each annotation as a text selection transformed into a list of word weights, Price in view of Farrett does not explicitly teach defining a first and second distance from the annotation and weighting keywords accordingly. Haveliwala teaches defining a first and second distance from an anchor by setting a bounding window size and selecting the keywords within (p. 435, Sect. 3.1). Haveliwala teaches weighting terms, i.e., keywords, based on their distance from the anchor (p. 437, Sect. 5.2, par. 1) with

terms having a greater weight according to the distance from the anchor, as shown in the logarithmic calculation. Haveliwala teaches locating relevant documents related to the anchor utilizing the weighted keywords. Price, Farrett, and Haveliwala are analogous art because all three are directed toward query and relevance searching of documents based on keywords. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price in view of Farrett, because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4) and the weighted history list of Farrett.

**Regarding dependent claim 16**, while Price in view of Farrett teaches interpreting each annotation as a text selection transformed into a list of word weights, Price in view of Farrett does not explicitly teach weighting each keyword according to a relative distance that the keyword is from the annotation. Haveliwala teaches defining a relative distance from an anchor by setting a bounding window size and selecting the keywords within (p. 435, Sect. 3.1). Haveliwala teaches weighting terms, i.e., keywords, based on their distance from the anchor (p. 437, Sect. 5.2, par. 1) with terms having a greater weight according to the relative distance from the anchor, as shown in the logarithmic calculation. Haveliwala teaches locating relevant documents related to the anchor utilizing the weighted keywords and locating the related content based on the

weighted keywords as weighted according to the relative distance that each keyword is from the annotation (p. 436, Sect. 3.3; p. 435, Sect. 3.1).

Price, Farrett, and Haveliwala are analogous art because all three are directed toward query and relevance searching of documents based on keywords. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price in view of Farrett, because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4) and the weighted history list of Farrett.

**Regarding dependent claims 17 and 18**, Price in view of Farrett teaches that the results of the search are re-ranked according to the weighted keywords, and that the search is performed using a query derived from the annotation and the weighted keywords, since Price teaches monitoring an electronic document for user annotations and recognizing entry of an annotation into the electronic document (p. 32, Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2, par. 4) because as a reader annotates a document the system performs queries and displays links to related pages (Fig. 3).

The queries locate documents related to the annotation using the annotation and context data proximal to the annotation, because each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2). Farrett teaches weighting each search term according to whether a particular search term is included in the history of search terms, a higher weight being assigned to

a search term that is included in the history of search terms (col. 4, l. 9-col. 5, l. 5; claim 1). Haveliwala teaches locating relevant documents related to the anchor utilizing the weighted keywords and locating the related content based on the weighted keywords as weighted according to the relative distance that each keyword is from the annotation (p. 436, Sect. 3.3; p. 435, Sect. 3.1).

Price discloses that each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2), and Farrett is directed toward weighted keywords, therefore Price and Farrett are analogous art and it would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

### ***Response to Arguments***

6. Applicant's arguments filed 09/27/2007 have been fully considered but they are not persuasive.

The combination of Price and Farrett does teach weighting words, and retaining a history of search terms, because Prices weighting words and retaining a history of search terms based on user annotations; Price teaches classifying annotations into several categories which are designated by user input of a gesture, including circled

phrases, underlines, highlights, circled passages, and margin bars, and Price teaches that the selections are then converted into queries and links are computed through a full text search (p. 34, col. 1, par. 2-5). Farrett teaches a client side search engine which retains a history record of search terms which is updated and refined, and further assigning a weighted probability category to a keyword that matches the search term keyword (col. 1, l. 40-col. 2, l. 36). Farrett teaches weighting each search term according to whether a particular search term is included in the history of search terms, a higher weight being assigned to a search term that is included in the history of search terms (col. 4, l. 9-col. 5, l. 5; claim 1).

Further, applicant's arguments address each reference separately rather than the combination of references as a whole (Remarks, p. 2-4), and are directed to the supposed deficiencies of Farrett rather than to the combination of Price and Farrett.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Price with Farrett. Price discloses that each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2), and Farrett is directed toward weighted keywords, therefore Price and Farrett are analogous art and it would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the client side search engine with history record disclosed by Farrett to the hypertext ink annotation system taught by Farrett, so that the system would have the ability to learn from prior searches for a user relative to a given knowledge base (Farrett, col. 1, l. 30-36), thereby enhancing the

support for reading and browsing in the same medium provided by Price (Price, p. 31, par. 1).

### ***Conclusion***

Any inquiry concerning this communication, or earlier communications from the examiner should be directed to Amelia Rutledge whose telephone number is 571-272-7508. The examiner can normally be reached on Monday - Friday 9:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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